

## **Argus Orthopaedic Zone**

### **Can Smoking Affect Bones?**

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#### ***Transforming patient information into patient understanding.***

Smoking is associated with many illnesses such as heart disease, blood vessel disease and several forms of cancer. Research shows that skin wounds heal slower in cigarette smokers.

*How many people also know that smoking has a significant impact on your bones and joints?*

Every tissue in the human body is affected by smoking, but many effects are reversible. By avoiding or quitting smoking you can reduce your risk for incurring many conditions. Quitting smoking can also help your body regain some of its normal healthy functioning.

#### **Why are bones affected?**

Bones are nourished by blood vessels like all the other tissues and organs of your body. Nutrients, minerals and oxygen are all supplied to the bones via the blood stream. Smoking elevates the levels of nicotine in your blood causing the blood vessels to constrict. Nicotine constricts blood vessels approximately 25% of their normal diameter. Because of the constriction of the vessels, decreased nutrients are supplied to the bones. It is suspected that this is the reason for the effect on bone healing. Of course it may not be the only reason.

#### **Smoking and Musculoskeletal Health**

- Smoking increases osteoporosis because nicotine slows the production of bone forming cells.
- It impairs absorption of Calcium.
- Smoking reduces the protective effect of estrogen replacement.
- It increases the risk of hip fracture by 40%.
- Shoulder rotator cuff tears are twice as large in smokers.
- It increases the chance and severity of bursitis and tendinitis.
- Fractures take much longer to heal in smokers because of the negative effect on osteoblasts (cells that form bone).
- Surgical complications are much more common.
- Athletic performance is affected significantly because lung function is impaired and there is less oxygen available for muscles used in sports.

- Smoking slows running and walking,
- Smokers have more lower back pain.

## **Discussion**

You can improve your chances of a successful outcome after surgery if you are a nonsmoker or have stopped altogether.

I know many surgeons who refuse to do elective orthopaedic surgery in smokers. I haven't taken that hard a line, but I do my best to inform patients that they may have great difficulty in healing after surgery if they smoke.

I have never done a study, but we see an awful lot of patients in the office and ER with fractures who are smokers.

Our results of rotator cuff surgery are definitely better in patients who don't smoke. There are good or excellent results in 84% of nonsmokers and only 35% good results in smokers who have rotator cuff repair surgery.

Finally, when I am taking care of a person with a fracture who is a smoker, I know the patient and I are in for a long relationship! Sometimes the fracture will not heal at all.

Answers to all your Orthopaedic Surgery and musculoskeletal questions can be answered by logging onto [www.orthopodsurgeon.com](http://www.orthopodsurgeon.com), which can take you to Your Orthopaedic Connection. Check it out.

Our goal is simple - To help people return to more pain free, functional lives.

Good health. Good life. All the best to you.

Be well.

Dr. Haverbush